NOAA Fisheries Habitat Program

2006 Accomplishments Report

Message from the Director

2006 was a year of challenges, opportunities, and successes for the NOAA Fisheries Service Habitat Program. We made progress in addressing many of these challenges and look forward to continuing this work in 2007 and beyond. We responded to new opportunities and succeeded in protecting and restoring marine and coastal habitat from river headwaters to the continental slopes and beyond.

Our programs continue to strengthen and capitalize on partnerships, both internal and external. The regional offices, science centers, and headquarters programs are working together to express our shared vision and document this vision in a new strategic plan. When complete, the strategic plan will help guide our programs and priorities nationally and regionally for the coming years. We are strengthening partnerships with other NOAA offices to ensure we provide complementary services to our constituents. Externally, we are working with constituent groups to advance protection and restoration goals and increase local and regional capacity to support habitat conservation.

Other issues are receiving international attention such as protecting productive deep sea habitats from potentially destructive fishing practices. We are drawing upon past successes to shape how we respond to these new priorities.

This report highlights some of our significant accomplishments from the past year. We are excited about the geographic and programmatic breadth of our accomplishments and we look forward to building upon these successes.

Patricia Montanio
Director, Office of Habitat Conservation
NOAA Fisheries Service

NOAA Fisheries Habitat Program

The NOAA Fisheries Service Habitat Program protects and restores habitat essential to the nation's marine life. These habitats are the foundation for healthy ecosystems, productive fisheries, and robust coastal economies. Our program is comprised of the Office of Habitat Conservation at NOAA headquarters, the Habitat Conservation divisions in each of the six regional NOAA Fisheries Service offices, and the six regional science centers. We support a broad array of programs with national and regional perspectives which allows for both regional and national responses to priorities that often vary from region to region.

The Magnuson-Stevens Fishery Conservation and Management Act is a strong driver requiring us to advance conservation that helps sustain productive populations of living marine resources. This requirement allows us to review and recommend conservation measures to protect sensitive and essential habitats for managed species. Each year the program reviews more than 3,000 permit applications for projects that may adversely affect marine, estuarine, or coastal habitat that support fisheries and marine life. We make recommendations on how to avoid, minimize, or compensate for these potential impacts. These efforts are a critical component of our habitat protection strategies. Regulatory programs such as permit reviews are complemented by our proactive, cooperative strategies for habitat conservation.

Our mandates require that we work with federal agencies, state and local governments, and private industry to ensure conservation of habitat essential to our nation's fisheries and marine life. We are advancing the President's agenda to use cooperative approaches in both protection and restoration programs. These cooperative approaches contribute to increased local and regional capacity to minimize degradation of important marine and coastal habitat. NOAA envisions an ecosystem approach to managing coastal and marine resources; we are supporting efforts to further this mission.

For example, the Southeast Regional Office is actively involved in the Southeast Aquatic Resources Partnership, a regionally-based partnership with broad state, federal, industry, and non-governmental membership that is viewed as an effective approach for implementing an ecosystem-based approach to resource management. This partnership is developing state aquatic nuisance species management plans and sponsoring development of pilot watershed assessment plans for use in identifying conservation and restoration priorities. Similarly, efforts underway in the NOAA Chesapeake Bay Office to implement ecosystem approaches to management will provide an excellent model for similar efforts in other regions.

Primary Legislative Mandates

- Magnuson-Stevens Fishery Conservation and Management Act
- Fish and Wildlife Coordination Act
- Energy Policy Act of 2005
- Federal Power Act
- NOAA Authorization Act of 1992

Conserving Marine & Coastal Ecosystems

Protecting Fragile Deep Sea Coral Habitats

Bushy coral and octopus. Credit: NOAA.

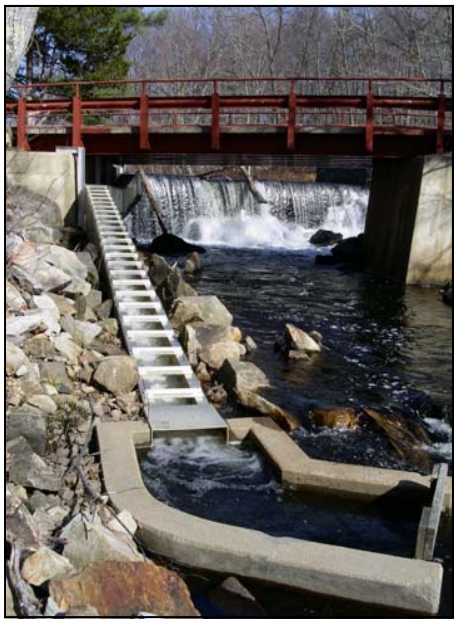
In 2006, more than 550,000 square miles of Pacific Ocean habitat were protected from potentially destructive fishing practices, particularly bottom-trawling. In June, NOAA and the Pacific Fishery Management Council established habitat conservation areas off the coasts of Washington, Oregon, and California covering more than 150,000 square miles of ocean habitat. Fishing methods that can cause long-term damage to sensitive ocean floor habitats are now prohibited within most of these areas. In July, NOAA regulations went into effect for conservation areas established by the North Pacific Fishery Management Council that cover almost 398,000 square miles in the Gulf of Alaska and Aleutian Islands. One area, the Aleutian Islands Habitat Conservation Area, spans approximately 370,000 square miles - an area larger than the states of Texas and Colorado combined.

The geographic scope of these conservation measures is nothing short of historic. Combined, the areas are more than three times the size of all United States National Parks. These historic protections, implemented by NOAA with the support and advice of the regional fishery management councils, fishing industry, and environmental groups, made protecting Essential Fish Habitat a principal component of an ecosystem approach to conserve fish populations in the Pacific Ocean. These proactive actions build on previous deep coral conservation measures in the Atlantic and Pacific, and conserve a diverse range of habitats that support deep sea corals, productive fisheries, and unique biological diversity. NOAA now protects more than two million square miles of benthic habitat on the seafloor.

Improving Fish Passage

Under the Federal Power Act, NOAA Fisheries has authority to require measures to ensure the safe, timely, and effective upstream and downstream passage of fish through hydroelectric project dams licensed by the Federal Energy Regulatory Commission. Licenses for privately-owned hydroelectric facilities come up for renewal every 30-50 years, giving NOAA Fisheries a valuable but infrequent opportunity to secure and safeguard natural resource benefits like fish passage during relicensing.

In November 2005, as a result of the Energy Policy Act, NOAA and the Departments of the Interior and Agriculture established new regulations that modified licensing procedures for hydroelectric dams. NOAA, with the Department of the Interior, implemented these new regulations during the relicensing process for three hydroelectric facilities in 2006 and 2007: Klamath Hydroelectric Project in northern California (favorable decision for NOAA Fisheries and the U.S. Fish & Wildlife Service after full hearing), Santee Cooper Hydroelectric Project in South Carolina (settlement without full hearing), and Bar Mills Hydroelectric Project in Maine (settlement affecting several projects without hearing). Positive outcomes on these projects for fish passage issues set excellent precedents for consideration of protections for fish and their habitat. These efforts should help to protect and restore access to more than 700 stream miles for ecologically and economically valuable fish and is expected to contribute to long-term benefits to their populations, habitats, and local economies that rely on healthy, intact ecosystems.



Ed Bill's Pond Fishway in Connecticut is one of many projects helping protect fish passage. Credit: NOAA.

Restoring Marine & Coastal Habitat

Historic Habitat Alterations Reversed

In July, NOAA celebrated the success of a landmark effort to restore ocean flow to the wetlands at Bolsa Chica in Orange County, California. The project restored more than 1,200 acres by opening a tidal inlet that had blocked tidal flow from the Pacific Ocean for more than 100 years. NOAA and numerous federal, state, local, and non-governmental partners completed the project in two years. The restored wetlands provide new habitat for coastal and estuarine fish, increase habitat for migratory birds, and also provide recreational opportunities for local residents. The restored wetlands also serve as important habitat for several threatened and endangered species. With 95 percent of California's coastal wetlands lost to development, the project is a valuable asset for protecting and enhancing coastal and marine resources.

Pilot Channel at Bahia Grande in Texas. Credit: NOAA.

Bahia Grande is an 11,000 acre estuary in Cameron County, Texas. Construction and maintenance of the Brownsville Ship Channel and State Highway 48 impeded tidal flooding of Bahia Grande for 70 years. A pilot channel between the Brownsville Ship Channel and Bahia Grande reconnected tidal flow in 2005. Hydrologic restoration of Bahia Grande will ultimately reconnect more than 10,000 acres of historically productive estuarine basins to the tidal influence of the lower Laguna Madre. The large-scale restoration project will have ecological and human heath benefits, including reduced dust in the area.

Repairing Damaged Habitats

In 2006, NOAA continued to repair and restore habitats damaged by oil spills, hazardous substance releases, and vessel groundings. On Staten Island, NOAA and partners completed restoration of Bridge Creek Marsh near a major shipping corridor in the New York/New Jersey area. More than 100 acres of salt marsh were damaged by 567,000 gallons of fuel oil leaked from a ruptured pipeline. This was the first event of this size that NOAA had responded to since the Exxon Valdez spill in 1989. The success of this restoration is attributed to the collaborative efforts of NOAA, the States of New York and New Jersey, and others.

In 2005, the merchant vessel Cape Flattery grounded in coral reef habitat near a harbor entrance in Oahu, Hawaii. NOAA, with the State of Hawaii and the U.S. Fish and Wildlife Service, formed a response team to carry out emergency reef restoration that reestablished more than 800 injured coral colonies. Rapid action by the response team minimized negative effects to coral colonies not directly affected by the grounding. Efforts to document injury and determine appropriate compensatory restoration actions are ongoing.

Another milestone in restoring damaged habitats occurred on Santa Cruz Island off southern California. Since 2001, NOAA and partners have been repairing habitats damaged by DDT, PCBs, and other contaminants discharged into the marine environment by the Montrose Chemical Corporation. For the first time in 50 years, a bald eagle chick hatched unaided by humans – a significant accomplishment after years of impaired bald eagle reproduction and recovery because of persistent levels of DDT and PCBs. Restoration and research continues – almost $3.5 million in grant funds were awarded in 2006 to fund projects for wetlands restoration, fishing outreach and education, and the evaluation of marine protected areas as a management tool.

Advancing Ecosystem Approaches

Cleaning Up Marine Debris

Marine debris damages fish habitat, injures and kills marine life, and compromises navigation safety. In 2006, NOAA led activities throughout the U.S. to reduce marine debris and minimize its damage to important marine habitats. In Hawaii, NOAA and partners removed lost or abandoned fishing gear located by aerial surveys. The initial effort removed 15 tons of debris from Oahu's beaches. NOAA also helped develop a program that allows fishermen to collect "derelict" gear while at sea and drop it off at a designated port. Local companies chop the collected derelict fishing gear and incinerate it to produce power for homes and businesses on Oahu. Fishermen have collected more than six tons of derelict gear since the program started in January 2006.

In southeast Florida, NOAA and partners mapped coral reefs harmed by tires that were put in the ocean in the 1970s in an effort to create fish habitat. NOAA helped develop a plan for tire removal and disposal that includes the relocation of corals that have colonized the tires. Based on recommendations in the plan, the Florida Department of Environmental Protection is now seeking funding for complete removal of the more than one million tires on the seafloor.

In the Chesapeake Bay, NOAA and partners locate lost or abandoned crab pots using sonar surveys and estimate the density of these "derelict" crab pots in parts of the Bay. Understanding the densities of derelict crab pots will help NOAA estimate how many blue crabs and other Chesapeake Bay resources die in lost traps.

Waste tire field in the Atlantic Ocean. Credit: NOAA.

Slowing the Spread of Invasive Species

NOAA marked a major success in controlling invasive species. NOAA and partners in southern California announced that the invasive alga, *Caulerpa taxifolia*, was completely eradicated from California's Agua Hedionda Lagoon in Carlsbad and from Huntington Harbor in Orange County. The highly invasive strain of the marine algae was first discovered in California in 2000 and was the first known occurrence in the Western Hemisphere. NOAA considered the "killer algae" a major threat to coastal and marine ecosystems because of its effects on Mediterranean ecosystems where the algae have caused ecological and economic devastation. There, *Caulerpa* has overgrown native seaweeds and reefs, harmed tourism and recreational diving, and physically impeded commercial net fisheries. In California, the cooperative effort and the rapid response contributed to the successful eradication. The response model used is viewed as an effective model for the eradication of other invasive species.

In Hawaii, NOAA and partners conducted a pilot eradication project designed to prevent the spread of snowflake coral from ports to the Northwest Hawaiian Islands. Snowflake coral, *Carijoa riisei*, has the potential to cause large scale displacement of native species, particularly the valuable black coral, which has substantial ecological, economic, and cultural value in Hawaii.

Ecosystem Management in the Chesapeake

The Chesapeake Bay Program formally adopted an ecosystem-based approach to fisheries management and the first-of-its-kind "Fisheries Ecosystem Planning in Chesapeake Bay" (Plan). The Plan will guide the Chesapeake Bay Program as it transitions from single-species fisheries management to an ecosystem-based, multi-species approach to management for the Bay and coastal region. Scientists and fisheries managers from NOAA, other federal agencies, and universities developed the Plan to broaden current management strategies and take into account the linkages between sustainable fisheries, habitat, and water quality. The program has given first priority to the development of ecosystem-based fishery management plans for oysters, striped bass, blue crabs, Atlantic menhaden, river herring, and American shad.

Enhancing Stewardship

Promoting Cooperative Conservation

NOAA celebrated the 10-year anniversary of the Community-based Restoration Program. The program started in 1996 with a few small coastal restoration projects and now funds more than 200 projects per year. The program tackles large and small-scale projects including complex dam removals and coral reef repairs. Citizen and partner involvement is the cornerstone of this highly successful program, which restored more than 6,000 acres of habitat and opened 70 miles of stream habitat for migratory fish in 2006. During its 10-year history, almost 120,000 volunteers have participated in on-the-ground restoration projects that enhance coastal and marine habitat. NOAA is expanding this cooperative, community-based approach into other arenas. Cooperative Habitat Protection Partnerships, a new strategy modeled after Community-based Restoration, will provide tools to communities to help them make decisions that will protect fish habitat and minimize habitat degradation.

Volunteers working on a seagrass restoration project. Credit: NOAA.

Supporting National Fish Habitat Initiatives

In April, Commerce Secretary Gutierrez joined federal, state, and private sector partners on the banks of the Potomac River in Washington, DC to launch the National Fish Habitat Action Plan. The Action Plan provides a blueprint to build effective local and regional partnerships that bring together resources to support healthy fisheries and waterways. Bill Hogarth, Assistant Administrator for NOAA Fisheries Service, was selected as one of twenty individuals to serve on the National Board to guide this new initiative. The Board, representing outdoor industries, federal and state natural resource agencies, Native American tribes, and conservation and recreation organizations, is charged with leading the implementation of this broad partnership-based effort to protect, restore, and enhance America's most imperiled aquatic habitat.

Fostering Local Education

In early 2006, NOAA and partners including the U.S. Environmental Protection Agency, National Park Service, and the U.S. Forest Service, kicked off the Chesapeake Network for Education of Municipal Officials (NEMO). NEMO is a collaborative network helping communities in the Chesapeake Bay watershed and Delmarva peninsula foster well-planned growth, preserve water quality, and protect natural areas. This unique network provides educational outreach programs that emphasize natural resource-based land use planning and better site design. Chesapeake NEMO delivers coordinated technical assistance and leverages financial resources, helping communities implement sound land use planning and watershed protection.

School children learning about habitat restoration. Credit: NOAA.

Looking Forward: 2007 & Beyond

In 2007, we will continue to support our core programs and NOAA mission goals. We also have some opportunities to focus on emerging or critical issue areas. We welcome your input and look forward to working with you in the coming year.

Research, Survey, and Protect Deep Sea Corals

Deep sea coral habitats represent hotspots of biological diversity in the deep ocean. The Magnuson-Stevens Fishery Conservation and Management Reauthorization Act of 2006 establishes a *Deep Sea Coral Research and Technology Program* in NOAA and authorizes regional fishery management councils to designate zones to protect deep sea corals from damage from fishing gear. In 2007, we will lay the groundwork for this new Program. NOAA will publish the first peer reviewed report on the *State of Deep Coral Communities of the United States* and a *NOAA Deep Coral and Sponge Research and Conservation Strategy*. Several regional fishery management councils are expected to take further action to protect these valuable resources.

Deep sea bamboo coral. Credit: NOAA.

Promoting Hazard Resilient Coastal Communities

Intact, functioning habitats mitigate the effects of hazardous storms on coastal communities and increase the health of fishery resources relied upon by these communities. We currently fund and implement projects such as living shorelines, barrier island restoration, and floodplain restoration that increase community resilience to hazards and provide habitat vital for coastal and marine resources. In 2006, we completed the first phase of Louisiana's largest barrier island restoration project. Work on this project will continue into 2007 and will protect fragile marshes that mitigate the effects of storm surges on coastal ecosystems and communities.

Shoreline protection projects help protect restored marshes in Louisiana. Credit: NOAA.

Maintaining River Access for Fish

More than 2.5 million dams block 600,000 river miles in the United States. Many of these dams provide clean energy for our country but countless others are idle and decrepit. Despite their historical value and importance for producing electricity, dams and other structures that block natural river flow prevent annual fish migrations between spawning grounds and marine habitat. In 2007, we will continue our work on fish passage issues. We will help improve interagency coordination to better serve the public's fish passage need. We will continue to engage our industry, tribal, and conservation partners to improve fish passage and evaluate other partnership opportunities to tackle large scale dam removals.

Tearing down Henniiker Dam in New Hampshire..
Credit: NOAA.

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